IN THE CLAIMS:

Please cancel claims 4-7, 14-16, 22-25, 32-34, 37 and 121. Claims 38-120 and 122-245 previously cancelled. Please add claims 246-256.

1. (Unchanged) A method of determining the spacing between a patterned template and a substrate, comprising

positioning the patterned template and the substrate in a spaced relationship to one another such that a gap is created between the patterned template and the substrate,

applying light to the patterned template and the substrate, wherein the light comprises a plurality of wavelengths;

monitoring light reflected from a surface of the patterned template and the substrate;

determining the distance between the surface of the patterned template and the substrate based on the monitored light.

2. (Unchanged) The method of claim 1, further comprising determining an error signal, wherein the error signal corresponds to the difference between a desired distance between the surface of the patterned template and the substrate and the determined distance between the surface of the patterned template and the substrate.

3. (Unchanged) The method of claim 1, further comprising determining an error signal, wherein the error

signal corresponds to the difference between a desired distance between the surface of the patterned template and the substrate and the determined distance between the surface of the patterned template and the substrate; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the distance between the surface of the patterned template and the substrate.

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8. (Unchanged) The method of claim 1, further comprising determining the distance between the surface of the patterned template and the substrate at a plurality of locations and determining whether the surface of the patterned template and substrate are substantially parallel based on the plurality of distance determinations.

9. (Unchanged) The method of claim 8, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the surface of the patterned template and the substrate required to bring the surface of the patterned template and the substrate into a substantially parallel configuration.

10. (Unchanged) The method of claim 8, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the surface of the patterned template and the substrate required to bring the surface of the patterned template and the substrate into a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the surface of the patterned template and the substrate to achieve a substantially parallel configuration.

11. (Unchanged) The method of claim 1, further comprising determining the distance between the surface of the patterned template and the substrate at 3 or more non-colinear locations and determining whether the surface of the patterned template and substrate are substantially parallel based on the 3 or more distance determinations.

12. (Unchanged) The method of claim 11, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the surface of the patterned template and the substrate required to bring the surface of the patterned template and the substrate into a substantially parallel configuration.

13. (Unchanged) The method of claim 11, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the surface of the patterned template and the substrate required to bring the surface of the patterned template and the substrate into a substantially parallel configuration;

and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the surface of the patterned template and the substrate to achieve a substantially parallel configuration.

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17. (Unchanged) The method of claim 1, wherein determining the distance between the surface of the patterned template and the substrate comprises:

obtaining data representative of the intensity of at least some of the wavelengths of light reflected;

calculating a wavenumber, wherein the wavenumber is a function of the refractive index of a material disposed between the template and the substrate and the wavelength of the refractive light;

calculating the distance between the patterned template and the substrate, wherein the distance between the patterned template and the substrate is a function of the wavenumber and the intensity of reflected light corresponding to the wavenumber.

18. (Unchanged) The method of claim 1, wherein monitoring light reflected from the surface of the patterned template and the substrate comprises monitoring variations in intensity of the light across various wavelengths.

19. (Unchanged) A method of determining the spacing between a substantially planar template and a patterned substrate, comprising

positioning the substantially planar template and the patterned substrate in a spaced relationship to one another such that a gap is created between the substantially planar template and the substrate,

applying light to the substantially planar template and the patterned substrate, wherein the light comprises a plurality of wavelengths;

monitoring light reflected from a surface of the substantially planar template and the patterned substrate;

determining the distance between the substantially planar template and the patterned substrate based on the monitored light.

20. (Unchanged) The method of claim 19, further comprising determining an error signal, wherein the error signal corresponds to the difference between a desired distance between the surface of the substantially planar template and the patterned substrate and the determined distance between the surface of the substantially planar template and the patterned substrate.

21. (Unchanged) The method of claim 19, further comprising determining an error signal, wherein the error signal corresponds to the difference between a desired distance between the surface of the substantially planar template and the patterned substrate and the determined distance between the surface of the substantially planar template and the patterned substrate; and sending the error

signal to at least one actuator, wherein the at least one actuator is configured to adjust the distance between the surface of the substantially planar template and the patterned substrate

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26. (Unchanged) The method of claim 19, further comprising determining the distance between the surface of the substantially planar template and the patterned substrate at a plurality of locations and determining whether the surface of the substantially planar template and patterned substrate are substantially parallel based on the plurality of distance determinations.

27. (Unchanged) The method of claim 26, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the surface of the substantially planar template and the patterned substrate required to bring the surface of the substantially planar template and the patterned substrate into a substantially parallel configuration.

28. (Unchanged) The method of claim 26, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the

surface of the substantially planar template and the patterned substrate required to bring the surface of the substantially planar template and the patterned substrate into a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the surface of the substantially planar template and the patterned substrate to achieve a substantially parallel configuration.

29. (Unchanged) The method of claim 19, further comprising determining the distance between the surface of the substantially planar template and the patterned substrate at 3 or more non-colinear locations and determining whether the surface of the substantially planar template and patterned substrate are substantially parallel based on the 3 or more distance determinations.

30. (Unchanged) The method of claim 29, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the surface of the substantially planar template and the patterned substrate required to bring the surface of the substantially planar template and the patterned substrate into a substantially parallel configuration.

31. (Unchanged) The method of claim 29, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the surface of the substantially planar template and the patterned substrate required to bring the surface of the substantially planar template and the patterned substrate

into a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the surface of the substantially planar template and the patterned substrate to achieve a substantially parallel configuration.

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35. (Unchanged) The method of claim 19, wherein determining the distance between the surface of the substantially planar template and the substrate comprises:

obtaining data representative of the intensity of at least some of the wavelengths of light reflected;

calculating a wavenumber, wherein the wavenumber is a function of the refractive index of a material disposed between the template and the substrate and the wavelength of the refractive light;

calculating the distance between the patterned template and the substrate, wherein the distance between the patterned template and the substrate is a function of the wavenumber and the intensity of reflected light corresponding to the wavenumber.

36. (Unchanged) The method of claim 19, wherein monitoring light reflected from the surface of the substantially planar template and the patterned substrate

comprises monitoring variations in intensity of the light across various wavelengths.

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246. (New) A method of determining a spacing between the template and the substrate, with a material being disposed between the template and the substrate, the method comprising:

positioning the template and the substrate in a spaced relationship to one another such that a gap is created between the template and the substrate, with said material being disposed in said gap;

applying light to the template and the substrate, wherein the light comprises a plurality of wavelengths;

monitoring light reflected from a surface of the template and the substrate defining monitored light;

determining a magnitude of the spacing between the template and the substrate based on the monitored light by obtaining data representative of the intensity of at least some of the wavelengths associated with the monitored light and determining a wavenumber associated therewith, wherein the wavenumber is a function of the refractive index of the refractive light and the wavelength of the refractive light, with said magnitude being a function of the wavenumber.

247. (New) The method of claim 246, further comprising determining an error signal, wherein the error signal corresponds to the difference between a desired

distance between the template and the substrate and the magnitude.

248. (New) The method of claim 246, further comprising determining an error signal, wherein the error signal corresponds to the difference between a desired distance between the template and the substrate and the magnitude; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the distance between the surface of the template and the substrate.

249. (New) The method of claim 246, wherein template comprises a plurality of recesses on a surface of the template.

250. (New) The method of claim 246, wherein template comprises a plurality of recesses on a surface of the template, wherein the recesses are of a known depth.

251. (New) The method of claim 246, wherein template comprises a plurality or recesses on a surface of the template and wherein applying light to the template and substrate comprises passing light through one or more of the recesses.

252. (New) The method of claim 246, wherein the template comprises a plurality or recesses on a surface of the template and wherein the depth of each recess is at least ¼ of the mean wavelength of the light applied to the template and substrate.

253. (New) The method of claim 246, further comprising determining the distance between the template and the substrate at a plurality of locations and determining whether the template and substrate are substantially parallel based on the plurality of distance determinations.

254. (New) The method of claim 253, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the template and the substrate required to bring the template and the substrate in to a substantially parallel configuration.

255. (New) The method of claim 253, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the template and the substrate required to bring the template and the substrate in to a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the template the substrate to achieve a substantially parallel configuration.

256. (New) The method of claim 246, wherein the template is a patterned template.

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